+135-3858-6433 (GuangDong)
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RILSAN®

TECHNICAL DATA SHEET

RILSAN® BMN Y TLD

POLYAMIDE 11 PELLET

RILSAN® BMN Y TLD is a polyamide 11 compound. It is produced from a renewable & sustainable source (castor oil). This grade with improved friction properties is "self lubricated" and designed for injection molding.

Designation : ISO 16396 - PA11, MD, M1G1HLRS, C12-020

TYPE

PA11

MAIN APPLICATIONS

- Monofilament
- Industry - Stock Shape
- Industry - Others
- Industry - Distribution

DELIVERY FORM

- Pellets

TRANSFORMATION PROCESSES

- Injection Molding

ADDITIVES

- Heat Stabilized
- Light Stabilized
- Release agent

RHEOLOGICAL PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Melt volume flow rate (MVR), 235°C / 2.16 kg (455°F / 4.4 lb)	36	cm³/10min	ISO 1133
Shrinkage, Parallel (t+24h)	1.5	%	ISO 294-4
Shrinkage, Normal (t+24h)	1.4	%	ISO 294-4

MECHANICAL PROPERTIES

PROPERTIES	DRY / COND VALUE*	UNIT	TEST STANDARD
Flexural modulus, 23°C (73°F)	- / 1300	MPa	ISO 178
Tensile modulus, 23°C (73°F), 1 mm/min	- / 1600	MPa	ISO 527-1/-2
Yield strain, 23°C (73°F), 50 mm/min	- / 3	%	ISO 527-1/-2
Yield stress, 23°C (73°F), 50 mm/min	- / 45	MPa	ISO 527-1/-2
Nominal strain at break, 23°C (73°F), 50 mm/min	- / > 200	%	ISO 527-1/-2
Stress at break, 23°C (73°F), 50 mm/min	- / 33	MPa	ISO 527-1/-2
Hardness, Shore D, 15 s	- / 70		ISO 868
Charpy notched impact strength, 23°C (73°F)	- / 7	kJ/m2	ISO 179 1eA
Charpy notched impact strength, -30°C (-22°F)	- / 7	kJ/m2	ISO 179 1eA
Charpy unnotched impact strength, 23°C (73°F)	- / No Break	kJ/m2	ISO 179 1eU
Charpy unnotched impact strength, -30°C (-22°F)	- / No Break	kJ/m2	ISO 179 1eU

*DRY: Dry As Molded (DAM) if pellet / Dry if powder.
COND: Conditionned.

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THERMAL PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Melting temperature, 10°C/min	189	°C	ISO 11357-1/-3
Heat deflection temperature, 0.45 MPa	155	°C	ISO 75-1/-2
Heat deflection temperature, 1.8 MPa	50	°C	ISO 75-1/-2
Vicat softening temperature, 50N at 50°C/h	162	°C	ISO 306
Coefficient of linear thermal expansion	90	10E-6 / °K	ISO 11359-1/-2

ELECTRICAL PROPERTIES

PROPERTIES	DRY / COND VALUE*	UNIT	TEST STANDARD
Relative permittivity, 100Hz	4 / -		IEC 62631-2-1
Relative permittivity, 1Mhz	3 / -		IEC 62631-2-1
Dissipation factor, 100Hz	545 / -	E-4	IEC 62631-2-1
Dissipation factor, 1Mhz	212 / -	E-4	IEC 62631-2-1
Surface resistivity, 23°C (73°F)	- / 1E+14	Ohm/sq	IEC 62631-3-2
Volumic (transversal) resistivity, 23°C (73°F)	- / 1E+12	Ohm.m	IEC 62631-3-1
Comparative tracking index, 23°C (73°F)	- / 600		IEC 60112
Dielectric Strength, 23°C (73°F)	- / 55	kV/mm	IEC 60243-1

*DRY: Dry As Molded (DAM) if pellet / Dry if powder.
COND: Conditionned.

OTHER PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Specific gravity, 23°C (73°F)	1.04	g/cm³	ISO 1183-1
Water absorption, 23°C (73°F), immersion, equilibrium	1.9	%	ISO 62

PACKAGING

Available packaging:
- 25 kg / 55 lb bags

SHELF LIFE

Two years from the date of delivery, when stored properly (sealed bags, appropriate moisture, UV protection and temperature). For any use above this limit, please refer to our technical services.

PROCESSING CONDITIONS:

- Typical melt temperature (Min / Recommended / Max) - Injection Molding: 210°C / 230°C / 260°C (410°F / 445°F / 500°F)
- Typical mold temperature - Injection molding: 20-60°C (70-140°F)
- Drying time and temperature: 80-90°C (175-195°F) / 4-6 hours

SPECIAL CHARACTERISTICS

- Bio-based